Management Information System
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Module – 08
E-commerce : Digital Markets, Digital Goods Introduction to E - Commerce
Lecture – 35
Introduction to E – Commerce

Hello, welcome to the week 8 of this course on "Management Information System"! So, this week we will talk about electronic commerce, mobile commerce and other internet enabled digital technologies which facilitate exchange of value. So, this particular session or this particular module is termed as 'E-Commerce Digital Markets, Digital Goods'.

And in the first session, we will be discussing about, it will be an introduction to what e-commerce systems are; there you know briefly about their technology and more importantly about the various concepts that differentiate an e-commerce business from a traditional business. So, that is something that we will focus on in the first session.

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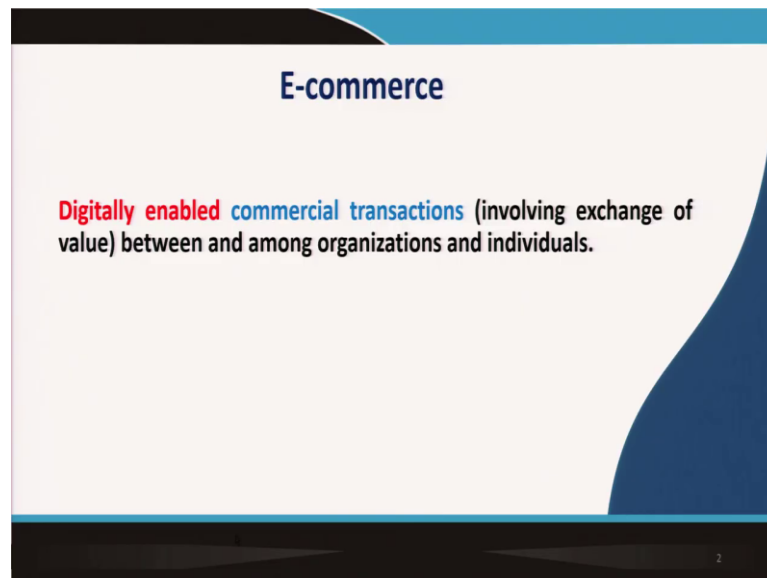
So, moving on what is E-commerce? We have heard so much about this term and we transact almost every day online I am sure most of you do. So, e-commerce so there are 2 important phrases one is in red and the other is in blue. So, digitally enabled commercial

transactions involving exchange of value between and among organizations and individuals.

So, what this means is e-commerce transactions are all digitally enabled or happen in the digital space happen over the internet and these are commercial transactions which involve exchange of value between the entities and who are the entities?

The entities could be organizations or they could be individual. So, if they are between 2 organizations that would be termed as business to business e-commerce, if they are between 2 individuals they would be termed C 2 C or consumer to consumer e-commerce or if they are between a business and an individual they it would be termed a business to consumer ecommerce.

So, so we will talk about these categories of e-commerce in the subsequent slides. But as of now this is what the formal definition of e-commerce is.

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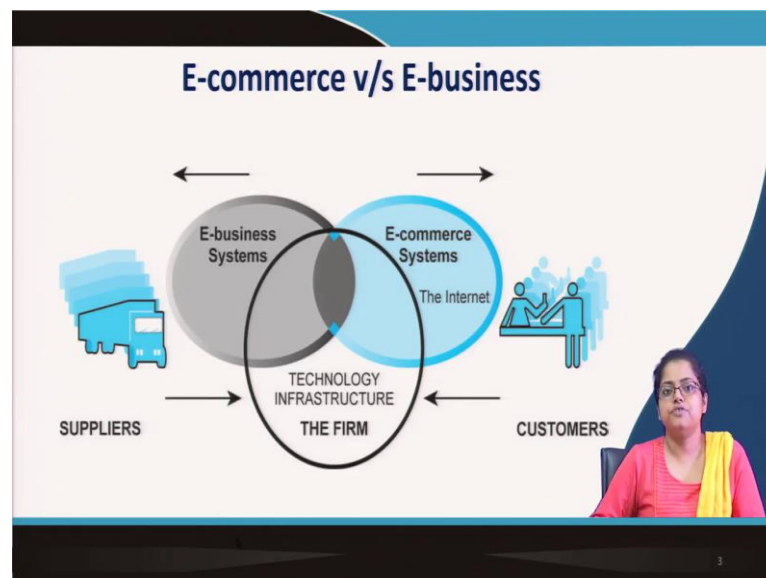
Now, coming to the difference between these 2 terms. You must have heard a lot about both of them e-commerce and e-business is there any difference between the two. So, there are different schools of thought.
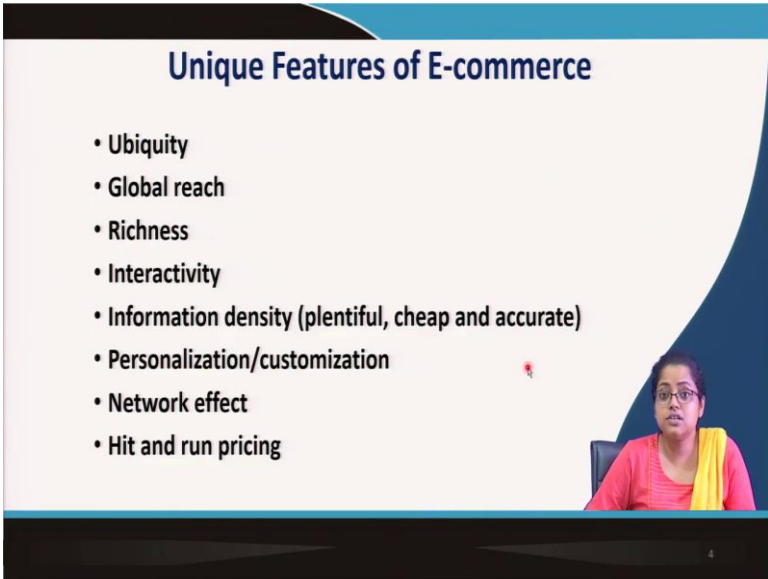
In fact, there are three schools of thought the first one says that e-commerce systems that we see here e-commerce systems that we see here are outward facing which means that in e-commerce systems internet facilitates the organization to interact with customers

Whereas, in e-business internet facilitates the organization to interact with suppliers vendors and to conduct internal business processes. So, e-commerce is outward facing, whereas e-business is inward facing that is within the organization. So, that is the first school of thought, the second school of thought says that e-commerce is a subset of e-business.

So, the entire organization whenever it interacts with anybody through the online platform that represents e-business, but e-commerce is only a subset wherein you know the organization interact directly with the customers this is the second school of thought and the third school of thought says uses both the terms interchangeably.

So, e-commerce and e-business are 2 terms that are used interchangeably. So, in this particular course we will be going ahead with the third concept that is we will be using both the terms interchangeably.

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Though you know this particular session will be focusing primarily on e-commerce, we will not be focusing too much on e-business here. So, what are the unique features of e-commerce and how does e-commerce differ from a traditional brick and mortar business? Ubiquity is the first major difference, ubiquity means that e-commerce businesses are available round the clock from any part of the world.

So, you can transact with an e-commerce website from any part of the world, but you cannot do so in case of a physical business; you have to physically visit the store in case of a traditional business and you can transact. But in e-commerce you can transact from any part of the world.

So, it has a it is ubiquitous and of course along with that it has a global reach, because e-commerce businesses can reach around the globe they need not be concentrated or confined to one particular geography they can reach around the globe.

So, there are a lot of companies, e-commerce companies which are originally located in one particular geography but they allow people from across the world to access them and to conduct transactions. Thirdly richness; so richness here talks about the richness of communication.

So, in e-commerce the communication between 2 parties that is the customer and the organization has become very rich today with the in you know with the evolution or the coming in of SMSs with chats when you are transacting with an e-commerce you know company you can automatically you can always chat in real time, you can also connect through email, you can connect through you know the information that is there on the website is also very rich.

Because earlier you know few years back the catalogues that would be available in e-commerce websites would be static catalogues. But today we do have dynamic catalogues, where you see you know you want to purchase a garment and you see there is a person who is actually wearing that garment and doing a quick twist. So, so that would help you get a better you know view of you know or an idea of what the garment would look like on you.

So, this is how e-commerce interactions today or e-commerce communication today has become very rich earlier, it was not as rich compared to traditional face to face communication.

But over a period of time e-commerce communication has improved leaps and bounds and that day is not too far when you know it will actually exceed the richness of communication in a face to face interaction.

Interactivity again in line with richness, the interactivity of an e-commerce communication is very different from that of a traditional face to face communication. Because it happens through as we mentioned through emails, it can happen through SMSs it can happen through videos it can happen through live chats and there are multiple other ways.

So, they can also be telephonic conversations, so multiple ways of enhancing the interactivity. Information density, so e-commerce websites do have a lot of information on them which is plentiful, cheap and also accurate.

Let me give you a few examples, so whenever you visit an e-commerce site and you want to purchase a particular product you would see n number of reviews of that particular product already there.

So, you can browse through that and you can get an idea of whether the product is good or bad that is not possible easily in case of a traditional interaction or in case of a physical transaction.

Similarly in e-commerce lot of information is also there about the product itself. The company itself puts in a lot of information about the product and that information is accurate compared to when you go to a store and interact with the sales person.

The sales; you know it depends on the efficiency of the sales person as to the you know the efficiency of the sales person would actually determine if the information that is reaching you is accurate or not right.

So, many a times the sales person sales people also fudge information they give you inaccurate information primarily to (Refer Time: 9:26), but that does not happen in case of an e-commerce website. So, you can also quickly compare between different e-commerce websites and compare across features of products, you can compare across prices of products.

So, information density is much more in terms of you know being plentiful cheap and accurate in case of an e-commerce business compared to a traditional brick and mortar business. Now coming to the 5th point here sorry the 6th point personalization and

customization what are these 2 aspects of e-commerce, these are very unique extremely unique and not possible in case of a physical business.

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So, let us take some examples prior to that what is personalization? Merchants can target their marketing messages to specific individuals by adjusting them to a person's click stream behavior, names, interests and past purchases.

So, this means that if you are a customer logging into an e-commerce site based on your you know click stream behavior or based on your name, your interest, your past history browsing history purchases etcetera.

The marketer will actually steer or target certain messages or advertisements at you. So, that is very difficult in case of a traditional business, wherein the salesperson can give you some information but there is a limitation to the amount of personalization that he or she can give you based on your prior behavior.

Now, this is a very-very common example I think most of you have seen this on Amazon and today on many other websites, this is done through their recommender systems. So, this says that customers who bought this item also bought.

So, in a way the you know it is showing you items that are frequently bought together, it is also telling you that customers who have bought a particular item that you are interested in have also bought all of these items.

So, that you know the company is indirectly recommending you to purchase one of these items, because they are best suited to your requirements based on your past history. We have also seen a similar example in module 2 when we were discussing about analytics provided by big basket dot com.

Where big basket was trying to give you have a it has a feature which tells you that you know this based on your past purchase history, you have forgotten to purchase this particular product in your current purchase. So, this is personalization.

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Now moving on Customization is slightly different. So, customization refers to changing the delivered product or service based on a user's preference or past purchases. So, personalization was primarily related to messages, whereas customization refers to actually changing the product or service based on a user's preference or past purchases.

Many a times customization is actually done by the user himself, by taking some you know taking help of certain features or certain guidelines provided by the marketer or the company, the customer does it himself most more often than not.

So, this is the difference between personalization and customization. So, this is an example here where you see the wall street journal having a section called my pro favorites. So, this is a section where you can customize your page based on your preference.

So, if you are interested in say you know in the wall street journal you want to read more about politics, you want to read more about share markets and you are interested in music.

So, you can actually customize your home page in such a manner that the information pertaining to your interests are visible to you when you open the visible or recommended to you when you open the wall street journal. So therefore, customization is built on the principle of I built it, therefore I own it right alright. So, moving back we had skipped 2 very important and interesting aspects or unique features of e-commerce. So, let us focus on them.

Network effect, network effect is the backbone on which e-commerce systems are actually built up. So, what this means is the additional value that you derive by being a part of a network or being a part of a platform, as more and more users are part of the same platform. So, in case of an e-commerce website there are certain websites which are marketplaces. So, there are buyers and sellers who are part of the e-commerce website.

We will talk about marketplaces in detail subsequently, but there are buyers and sellers as part of the entire network. So, as you know the buyers derive more value by being part of the platform or being part of the marketplace, if there are more sellers who have joined and sellers would derive more value if there are more buyers. Because if there are more buyers sellers would have more visibility and they would have more potential of their product being sold.

Whereas, if there are more buyers; sorry, if there are more sellers, then a buyer can obviously have a lot more options to choose from. So, this is the principle of network effect which started way back with you know with residential phones.

So, telephones that we had in our houses in say 90's or 80's wherein the value that you would derive by possessing that landline phone at home increases if more and more of your friends and relatives also possess a landline phone.

So, in case you have many of your friends did not have a landline phone and you are one of the first ones to possess a landline phone you would get bored and the phone would not give you much value. But as more and more of your friends and relatives started

having landline phones due to network effect you derive more value by possessing the landline phone.

So, network effect plays a very important role in the sustainability of e-commerce websites. Now moving on the last one hit and run pricing this is something that we experience with e-commerce sites all the time, the an alternative term to you know to represent the same concept is dynamic pricing. So, we see that based on demand and based on say the time of the day the demand and certain other features the prices of products keep on varying.

So, the prices of products vary even on an hourly basis many a times right. So, that is called hit and run pricing, which says that e-commerce websites believe in the concept of dynamic pricing which traditional stores generally hardly ever do and even if they do that is like on a long term basis. But in a short term that is during 24 hours itself or during you know 12 hours the prices there is no chance of prices changing.

So, hit and run pricing or dynamic pricing is a very-very typical unique feature of an e-commerce website. So, these are to summarize some of the most important features or unique features of e-commerce website that distinguish an e-commerce website clearly from a traditional physical store; alright.

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So, moving on types of E-commerce. We had briefly spoken about this in the first slide to highlight this aspect again B2C represents business to consumer e-commerce wherein businesses actually interact with individual consumers. So, very popular, this is the, this is very popular form of e-commerce; popular example is Amazon.

And in the subsequent lectures we will be discussing about different business models that exist in the in each of these categories of e-commerce. Coming to the next one the second category business to business, wherein businesses sell to other businesses. So, there are a lot of e-commerce websites which are B2B and B2B e-commerce is you know captures a much greater market share compared to B2C e-commerce.

So, Indiamart.com is one of the popular business to business e-commerce sites in India, there are other popular ones across the world such as Granger dot com which is very popular there is also Amazon business which is a subsidiary B2B subsidiary of Amazon. So, all of these are B2B e-commerce vendors.

Now coming to the third one consumer to consumer; wherein an individual sells to another individual through an e-commerce platform. So, very popular example of this is e bay. So, e-bay from its initial days came up with the concept of believed in the concept of consumer to consumer e-commerce.

So, it used to sell a lot of collectibles or you know lot of artifacts or old used items used to be sold on e-bay to other customers. The same model is followed by a lot of other companies such as Etsy and several others and the last one is very very popular today with the evolution of Smartphone's.

So, everyone possesses at least 2 smartphone's today, if not you know most people do definitely have 1 some people possess 2 or even more.

So, mobile commerce has taken up in a big way after the penetration of smartphone's in households. So, we will also spend some time on mobile commerce in the subsequent sessions. So, these are some of the popular e-commerce categories that we wanted to highlight in this slide.

Moving on a global E-commerce market ranking. So this is a ranking that is provided by considering certain very important parameters that determine how a particular country fares with respect to ecommerce.

So, some of the parameters on which countries are ranked are logistics, very important logistics is one of the most important touch points of ecommerce, because without it the entire e-commerce venture would go for a toss.

We also have average revenue per shopper which is an outcome variable of e-commerce, total market revenue again an outcome variable, percentage of population shopping online, number of online shoppers goes without saying, percentage of cross border shoppers.

So, in global e-commerce percentage of cross border shoppers play a very important role number of cross border shoppers and cumulative annual growth rate. So, this particular report consider the growth rate of from 2018 to 2022 of course this is in a forecasted period. So, so these are some of the parameters on which the global e-commerce market ranking was done.
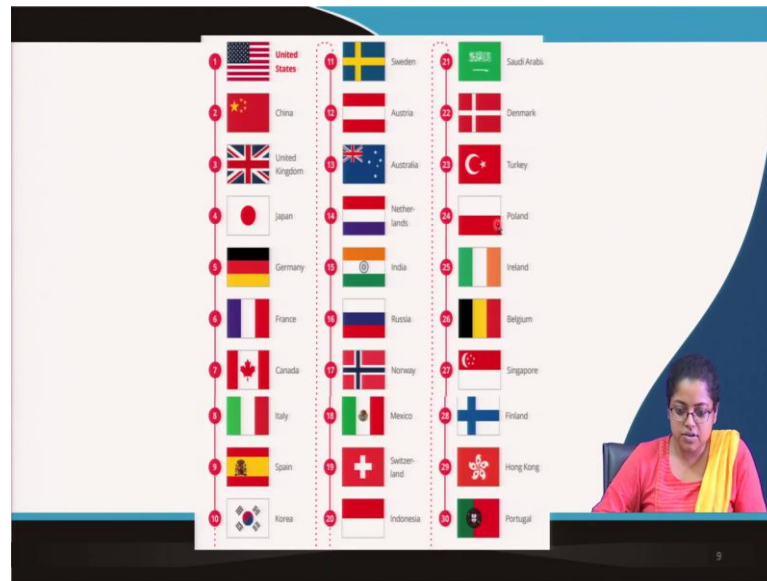
So, now based on this these are some of the countries which were ranked the best in the world with respect to e-commerce. So, at the upfront we have the United States followed by China, United Kingdom, Japan, Germany and other countries across the world.

So, it is also very interesting to note that there are certain countries which have a very you know small population compared to other countries such as Singapore you know such as you can say maybe Hong Kong Singapore.

These are called some smart gems; why are they termed as smart gems, because they have a very; Austria this is another very important nation which has a very-very; Denmark with a very-very small population but which are among the top 30. Whereas, there are other such as China, India which are which have a huge population and again they are among the top 30.

Therefore, these countries Hong Kong, Singapore, Denmark which have a, which have a very small population but have done exceptionally well with respect to e-commerce are categorized as smart gems.

Moving on some more data from this particular E-commerce market ranking. So, top 5 markets by total online shoppers we have China at the helm followed by India USA Indonesia and Japan.

So, and then top 5 countries by percentage of CAGR growth we have India at the helm here, at the forefront and then we have Malaysia followed by Indonesia, Philippines and Vietnam.

So, these are some of the trends that I wanted to highlight because just in case you know you are interested in any of these geographies you would be able to realize the potential that these geographies have with respect to e-commerce.

And if you want to start up an e-commerce venture in any of these geographies that would give you know starting up in any of these geographies could give you an advantage; alright.

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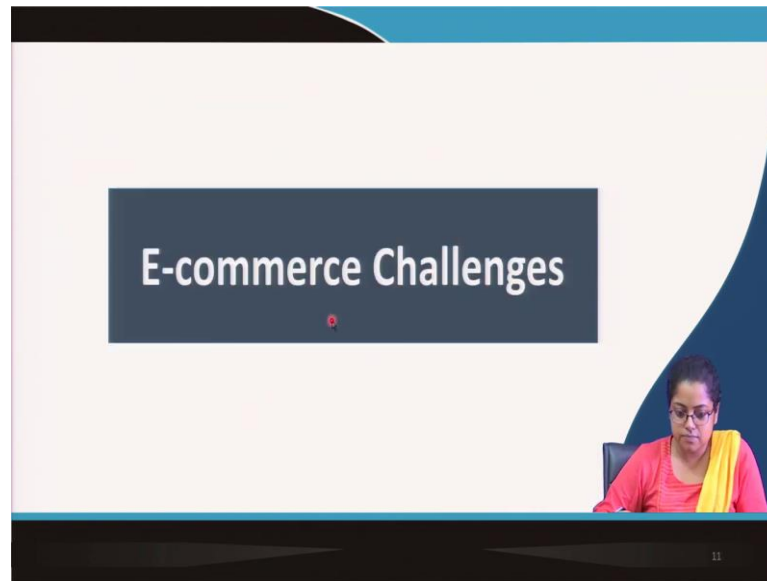
So, moving on we have spoken about the benefits of you know about how e-commerce differs from other traditional businesses. And of course, along with that we had also discussed about the benefits of e-commerce. So, we will now focus and talk little bit about the e-commerce challenges.

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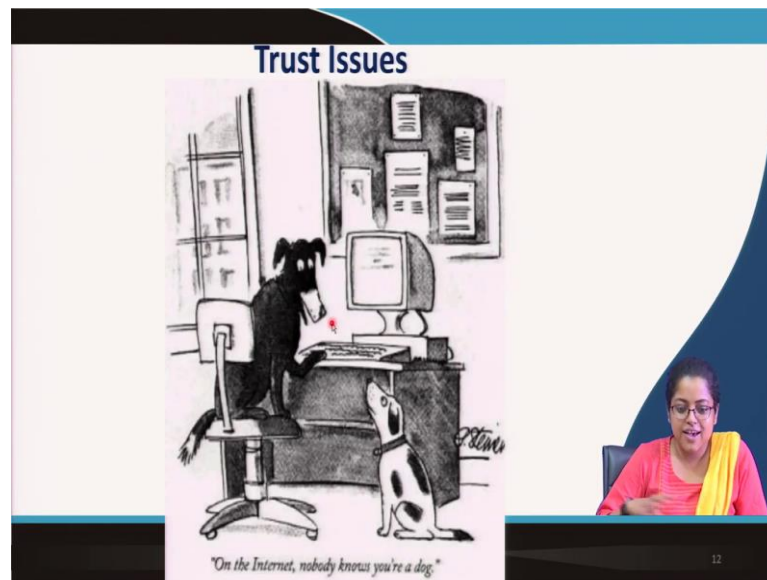
So, this particular slide talks about Trust issues. Trust issues have a major implication on the success of any e-commerce website. So, this graphic is a very interesting one because it says that on the internet nobody knows who you are. So, you might be a dog here it

this graphic says that you know 2 cute puppies dogs sitting there and they are transacting.

So, on the internet nobody knows who you are you could be anybody on the other side and you could be communicating with a customer. So, trust issues create a major problem in e-commerce websites.

Because you never know whom you are transacting with, you never know the credibility of the company you are transacting with unless it is a very credible popular established player. So, as a company you have to be very cautious about taking measures, so that the trust of your customer is never hampered or lessened.

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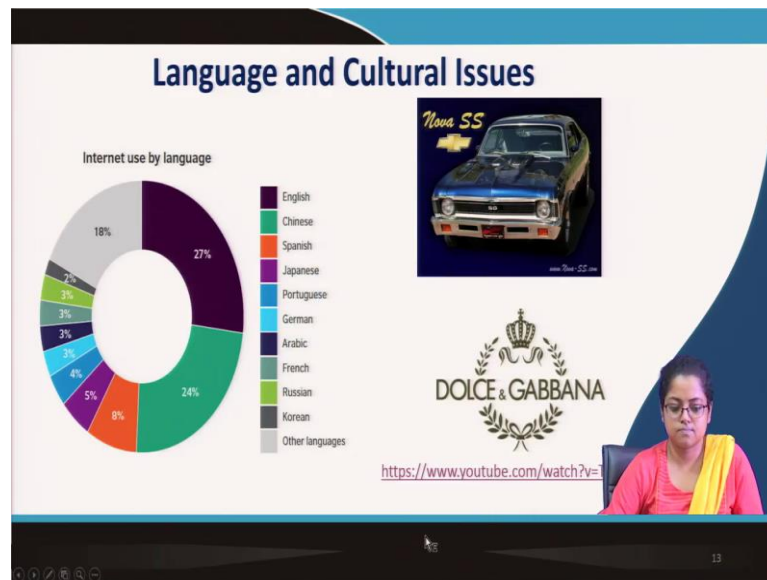
So, you have to be very cautious about that coming to the next one language and cultural issues. These are very important issues because most e-commerce companies today are going global and if they are going global they have to take care of the issues of the cultural issues of the language issues in different geographies.

So, here we see in the first graphic here internet used by language. So, though only 27 percent of online users are native English speakers, we see that most websites are by default written in English.

So, that could pose a problem right that is a huge challenge, because there are a lot of users across the world so around 73 percent of users who are not native English speakers so for them this might be a challenge.

Now coming to language issues here is a very interesting example I personally find it very interesting. So, Chevrolet Nova when it was launched in 1960 or 70 it took off very well.

So, it was launched by General Motors it took off very well across the world, but somehow it did not do well in Latin America and you know countries which whose native language was Spanish.

So, any guesses as to why maybe you know I will give you the answer. So, the word nova in Spanish means does not go. So, you understand what happens if a car has a name which suggests does not go, who would go ahead and buy that car. So, that is why in Spanish speaking geographies especially in Latin America and Spain this car was not getting sold.

So, that is a major problem of language issues. So, if you have to transact globally you have to consider languages across the world, because people are very sensitive the next one ok. So, give me a moment because I would want to play a video.

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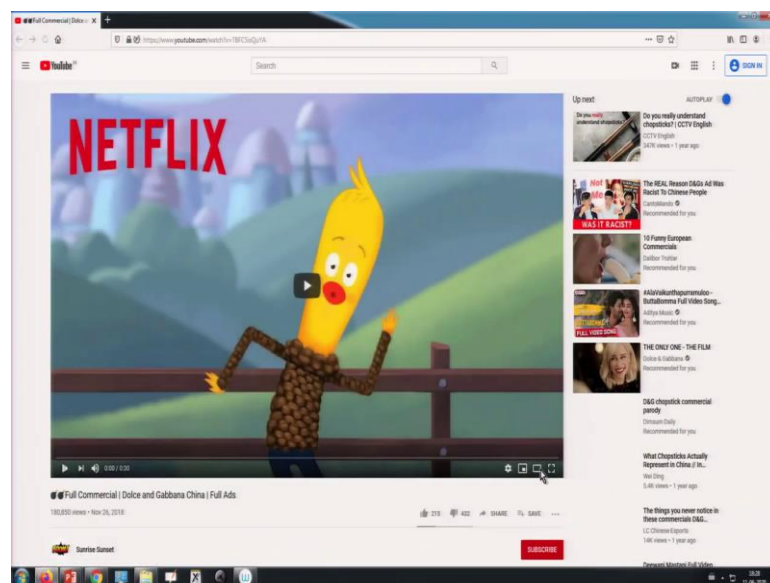
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This has to be edited; alright. So, I hope you have observed the video. Could you take any guesses? As to what the video was talking about. So, it is about a company called Dolce and Gabbana, which is a very popular Italian fashion luxury brand.

So now what you know when it was trying to market in China what it did is that it was showing a Chinese model trying to eat pizza with chopsticks and that did not go well with Chinese population.

Because culturally it was a shock to them and they did not take it well. So, Dolce and Gabbana had to take back the advertisement and had to consider changing it. So, if you know people are very sensitive about their culture.

So, if there by any means cultural issues are touched upon and cultural issues are tampered with people are not happy. So, so this is why when an e-commerce company has to go global cultural issues have to be always kept in mind.

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So, moving on security issues another major problem of e-commerce companies, because your business is online and you are transacting with your customers through their credit cards through other you know maybe they you are taking their credit card information their personal details.

So, in case you are hacked the entire data goes for a toss. So, let us take an example see you are an e-commerce vendor who is trying to do a lot of business during the Christmas period. But what happens is your competitor who is you know who is second in your business you are for example you are the; you are the industry number one.

So, the second in your business could try to actually stop your sales or interrupt your sales during the Christmas period by launching denial of service attack on you, which is a security breach as a result of which your website would go down and you wanted most of your customers to come and make transactions during the Christmas period. But that

is the period when your website goes down and all your hopes go for a toss. So, security issues play a very important role and they should always be handled in an e-commerce website.

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Finally legal and ethical issues, so legal issues play a very important role especially because companies e-commerce companies are going global there could be a lot of issues related to copyright, there could be a lot of issues related to IP violation. So, all of them have to be taken into consideration.
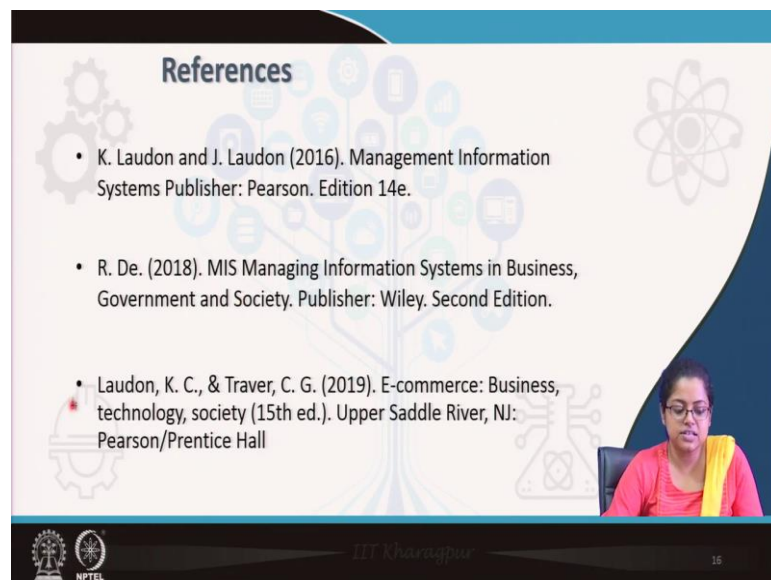
So, this first you know if I this first graphic over here it is actually it talks about the US context where there is HIPAA which is a privacy law related to privacy of electronic medical records. So, according to HIPAA, your; if you are a patient, your medical records cannot be shared with anybody without your consent.

So, that is a law and if that is violated then there could be legal issues related to your website and the second one here talks about online gambling which is another kind of e-commerce business today.

So, again this shows that in online gambling you could lose, because you never know who is on the other side. It could be an individual playing against you, it could be a group of people cuddling against you and defeating you, it could be a bot or a machine playing against you and defeating you.

So, there could be a lot of ethical issues and legal issues these are just 2 examples that can happen in an e-commerce business and if you were to you know in any time be a part of any e-commerce venture or an e-commerce business you have to take care of these issues and challenges and try to overcome them.

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So, these are some of my references; this is a very important book that I have referred to, 'E-Commerce: Business, Technology, Society'. So, I think this session we will wrap up with this; we have introduced you to the concepts of e-commerce and the challenges of e-commerce. In the next session, we will talk about the revenue models that are there in e-commerce and we will also focus on the B2C business models; alright; so, see you!

Thank you!